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2001

Soil Moisture Survey

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Recommended Citation

Olsen, Carroll; McGrath, Clarke; White, Michael L.; and Kohl, Kris, "Soil Moisture Survey" (2001). *Iowa State Research Farm Progress Reports*. 1704.

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Soil Moisture Survey

Abstract

Each spring and fall a soil moisture survey is conducted to determine the amount of plant-available moisture in the top five feet of many of the major soils in Iowa. Several of the sites are located in the Wallace Foundation for Rural Research and Development (WFRRD) area. Many producers make or alter their crop management plans according to expected soil moisture levels.

Disciplines

Agricultural Science | Agriculture

Soil Moisture Survey

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Each spring and fall a soil moisture survey is conducted to determine the amount of plant-available moisture in the top five feet of many of the major soils in Iowa. Several of the sites are located in the Wallace Foundation for Rural Research and Development (WFRRD) area. Many producers make or alter their crop management plans according to expected soil moisture levels.

An adequate soil moisture reserve increases the probability of average or above average crops in the following season. Most of the soils sampled can hold a maximum of 10.8 inches to 11.3 inches of water in the top five feet. A fall plant-available moisture level of less than 4 inches is considered “dry,” a level between 4 and 7 inches is call “marginal,” and a level greater than 7 inches is termed “favorable.”

Following are measurements taken in the Wallace area in October and November of 1999 and 2000. Samples taken before October 26 would not include significant rainfall events that occurred on or around November 1.

Table 1. Fall soil moisture amounts for soil moisture sampling sites in the WFRRD area, 2000.

<u>Location</u>	<u>Soil Type</u>	<u>Date Sampled</u>	<u>Inches of Water, Five-Foot Depth</u>	
			<u>1999</u>	<u>2000</u>
Armstrong Farm	Marshall	10/20/00	7.4	6.5
Cass County	Marshall	10/20/00	5.0	5.3
Pottawattamie County	Marshall	10/20/00	6.4	5.0
Mills County	Marshall	10/18/00	2.8	5.9
Fremont County	Marshall	10/18/00	1.5	0.9
Page County	Marshall	11/03/00	2.2	5.1
Shelby County	Marshall	10/19/00	6.0	2.4
Audubon County	Marshall	10/19/00	5.6	3.0
Carroll County	Marshall	11/10/00	4.2	5.8
Crawford County	Marshall	11/10/00	3.2	3.8
Adair County	Sharpsburg	11/03/00	6.8	8.6
Taylor County	Sharpsburg	11/03/00	8.1	5.6
Ringgold County	Arispe	11/03/00	9.2	8.3
Guthrie County	Nicollet	10/25/00	4.2	2.4
Madison County	Sharpsburg	10/25/00	7.5	7.4